witnessed in the process of urban change. To find a way out of this ambiguity, we need to see whether design is a rational process and if so, how? It is a broad understanding of rationality that will show us a way out of such narrow dualism.

René Descartes, who was 'the greatest rationalist ever' (Gellner, 1992, 1), had a firm belief in design as a rational endeavour. He mistrusted 'custom and example', and hence he saw the gradual growth of cities as a representation of the irrational custom and example. His rationalist principle was that, 'we ought never to allow ourselves to be persuaded of the truth of anything unless on the evidence of our reason' (Gellner, 1992, 1). For him, the best buildings, legal systems and opinions were those designed by a single author. On this basis, he held that, 'ancient cities . . . are usually but ill laid out compared with the regularly constructed towns which a professional architect has freely planned on an open plain' (quoted in Gellner, 1992, 4). This view of design as a rational undertaking was based on a classicist, individualist, and bourgeois notion of reason and rationality, which came under attack by later generations of empiricists and idealists. This rationalist view of design came to dominate the modernist thinking. Modernists promoted design as a rational process based on functionalism. However, this narrow definition of rationality has been criticised, as it was not paying enough attention to other dimensions of design and its impact on everyday lives. In Henri Lefebvre's (1991) terms, it was promoting an 'abstract space', and what was needed was a 'differential space' which accounts for diversity and everyday experiences.

A contemporary and more complex notion of rationality is offered by Jurgen Habermas's (1984) models of action and rationality. In his communicative action theory, Habermas attempts to broaden the scope of rationality by addressing, simultaneously, all three objective, social, and subjective dimensions of the social action. Rather than interpreting rationality as merely instrumental rationality, the social and psychological concerns of social actors are also brought into a definition of rational action. Despite the rigidities and limitations of this approach (Honneth, 1991), we may use these three moments of rationality to analyse design. The notions of action and rationality provide us with a tool to have insight into the dynamics of each action in the series of actions which constitute the urban design process. They focus on how individuals relate to their objective, subjective, and social contexts. Drawing upon the communicative action theory, we can analyse the urban design process as a combination of three distinctive and yet interwoven threads: the stage when designers are interacting with the objective world through the application of science and technology; the stage when designers are involved with other individuals and institutions constituting their social setting which is somehow involved in the process; and the stage when designers are interacting with their own subjective world of ideas and images. Depending on the circumstances, however, these analytically distinctive stages are usually closely interlinked to constitute a single, complex process.

Urban design as a technical process

We can look at urban design as a purely technical process, in which specific skills from town planning, architecture, and engineering, among others, are employed to utilise resources in the production and management of space. Designers often need to ensure an effective use of the rules and resources in the preparation and implementation of the design. In doing so, a high level of technical competence is required: from understanding of the rules and regulations with which the design process deals, to analysing the circumstantial conditions, to developing alternative approaches, and to formulating a final solution for a specific task.

In the majority of design and development projects, the technical approach has been dominant. Entirely new settlements would be built as physical objects which are the product of a technical process. Especially in the periods of rapid economic expansion, the technical approach tends to predominate. The whole project of the modern movement in architecture was based on technological necessity, as the built environment was required to be made fit for the machine age.

The main concern in urban design has often been the transformation of physical space. In this technical process, an instrumental rationality is used to evaluate each segment of the action against its aims and context. Any action which is not corresponding to functional expectation, technological capability, or financial capacity has been regarded as irrational. Designers rely on knowledge and skills of their own and of other related professionals dealing with the built environment to utilise the available resources.

But there are limits to the rationality that can be employed. Any change in one of the structures, which may be largely out of the agency's influence, would turn the rationality of a decision into an irrationality. The introduction of a new technology, for example, would make a solution obsolete and in need of